SSCOR, INC.

TECHNICAL MANUAL

SSCOR, INC.®
11064 Randall Street • Sun Valley, CA 91352 • USA
Telephone +1-818-504-4054 • 800-434-5211
Fax +1-818-504-6032
www.sscor.com
Email: marketing@sscor.com

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EMC / RFI Caution

CAUTION: Medical Electrical Equipment needs special precautions regarding Electromagnetic Compatibility (EMC) and needs to be installed and put into service according to the EMC information provided in the following tables.

Portable and mobile Radio Frequency (RF) communications equipment can affect Medical Electrical Equipment.

Accessories: DC power cord of a maximum length of 96 inches (2,44 meters) (SSCOR part numbers 80665 and 80965). AC Converter cable of a maximum length of 96 inches (2,44 meters) (SSCOR part numbers 80521-100, 80522-100, and 80531-100). DC Charger and Power supply cable of a maximum length of 96 inches (2,44 meters) (SSCOR part number 80529). Medical grade power cord of a maximum length of 96 inches (2,44 meters) (SSCOR part number 80551). DC Charger cable of a maximum length of 96 inches (2,44 meters) (SSCOR part number 80533).

WARNING: The use of accessories, other than those specified, except those supplied or sold by SSCOR, Incorporated as replacement parts for internal or external components, may result in increased EMISSIONS or decreased IMMUNITY of the SSCOR aspirator.

Guidance and manufacturer's declaration – electromagnetic emissions

SSCOR aspirators are intended for use in the electromagnetic environment specified below. The customer or the user of the SSCOR aspirator should assure it is used in such an environment.

Emissions Test	Compliance	Electromagnetic environment-guidance
RF emissions CISPR 11	Group 1	SSCOR aspirators use RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	SSCOR aspirators are suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations /flicker emissions IEC 61000-3-3	Complies	

EMC / RFI Caution

Guidance and manufacturer's declaration – electromagnetic emissions
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Immunity test	**IEC 60601test level**	**Compliance level**	**Electromagnetic environment - guidance**
Electrostatic discharge (ESD)IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input linesIEC 61000-4-11	<5% UT(>95% dip in UT)for 0.5 cycle 40% UT(60% dip in UT)for 5 cycles 70% UT(30% dip in UT)for 25 cycles <5% UT(>95% dip in UT)for 5 seconds	<5% UT(>95% dip in UT)for 0.5 cycle 40% UT(60% dip in UT)for 5 cycles 70% UT(30% dip in UT)for 25 cycles <5% UT(>95% dip in UT)for 5 seconds	Mains power quality should be that of a typical commercial or hospital environment. If the user of the aspirator requires continued operation during power mains interruptions, it is recommended that the aspirator be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE U_T is the a.c. mains voltage prior to application of the test level.

EMC / RFI Caution

Guidance and manufacturer's declaration – electromagnetic emissions

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Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the aspirator, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 GHz	3 V	d = 1,2vP
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	d = 1,2vP 80MHz to 800 MHz d = 2,3vP 800MHz to 2,5GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a should be less than the compliance level in each frequency range.b Interference may occur in the vicinity of equipment marked with the following symbol:

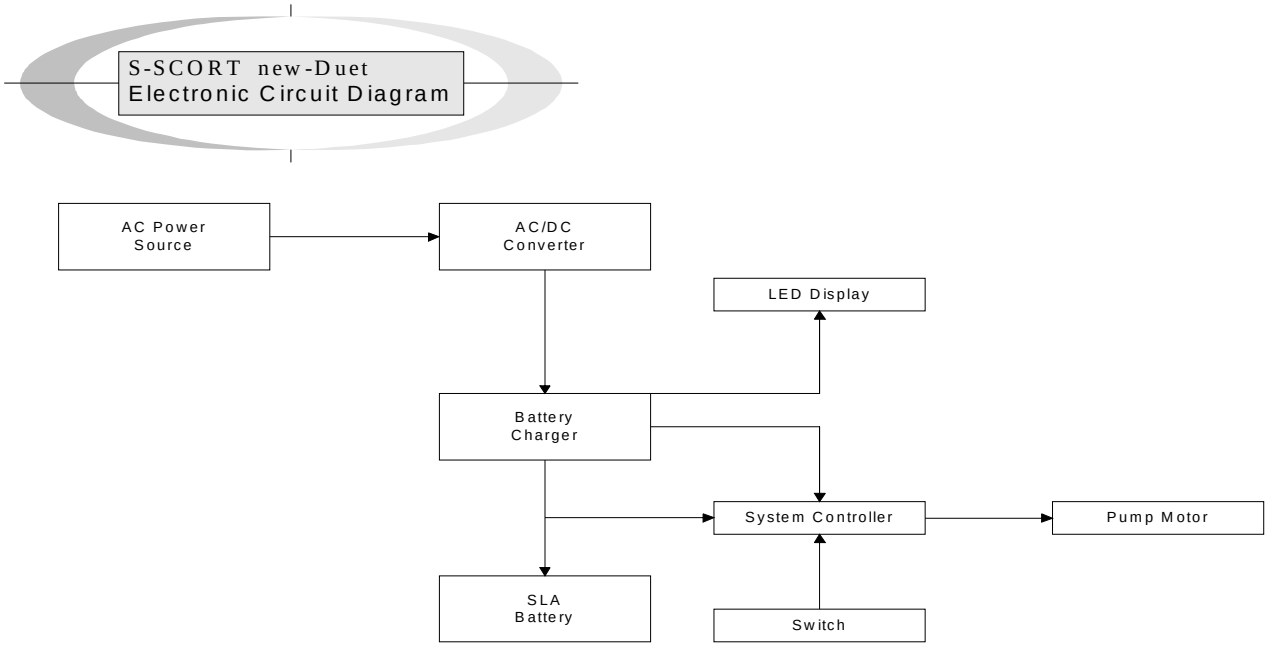
NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

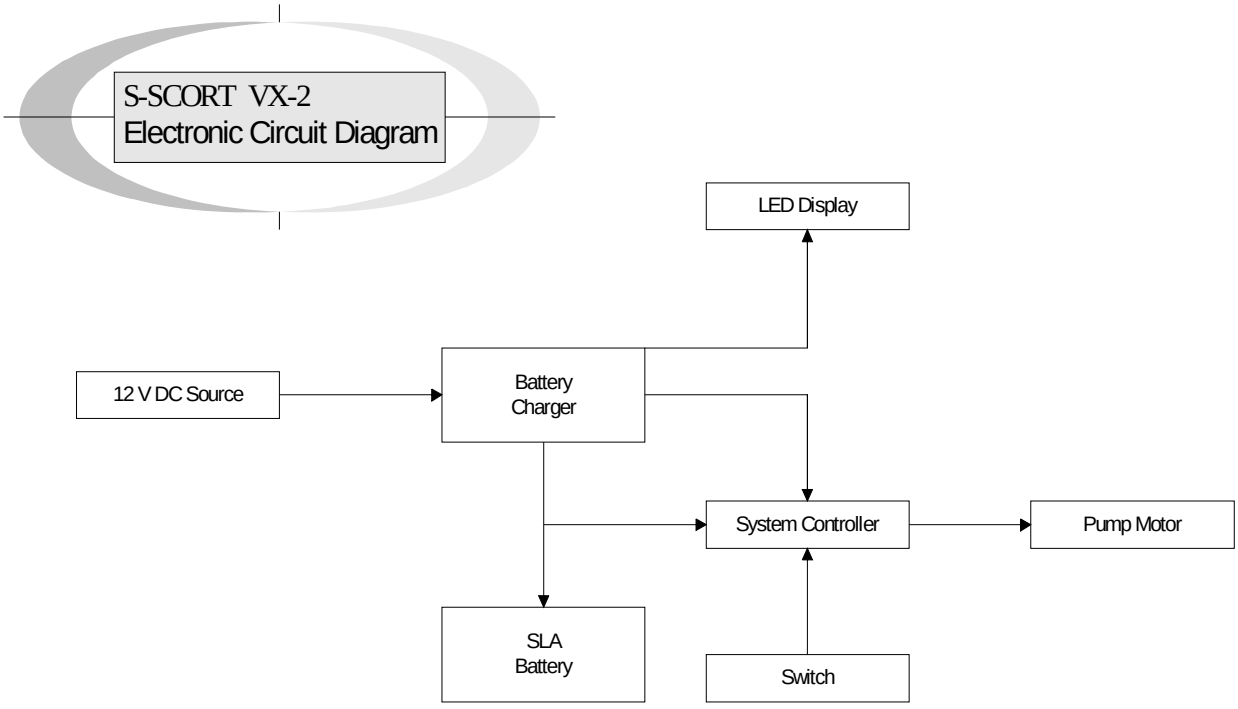
NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

[A] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, and electromagnetic site survey should be considered. If the measured field strength in the location in which the SSCOR aspirator is used exceeds the applicable RF compliance level above, the SSCOR aspirator should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the SSCOR aspirator.

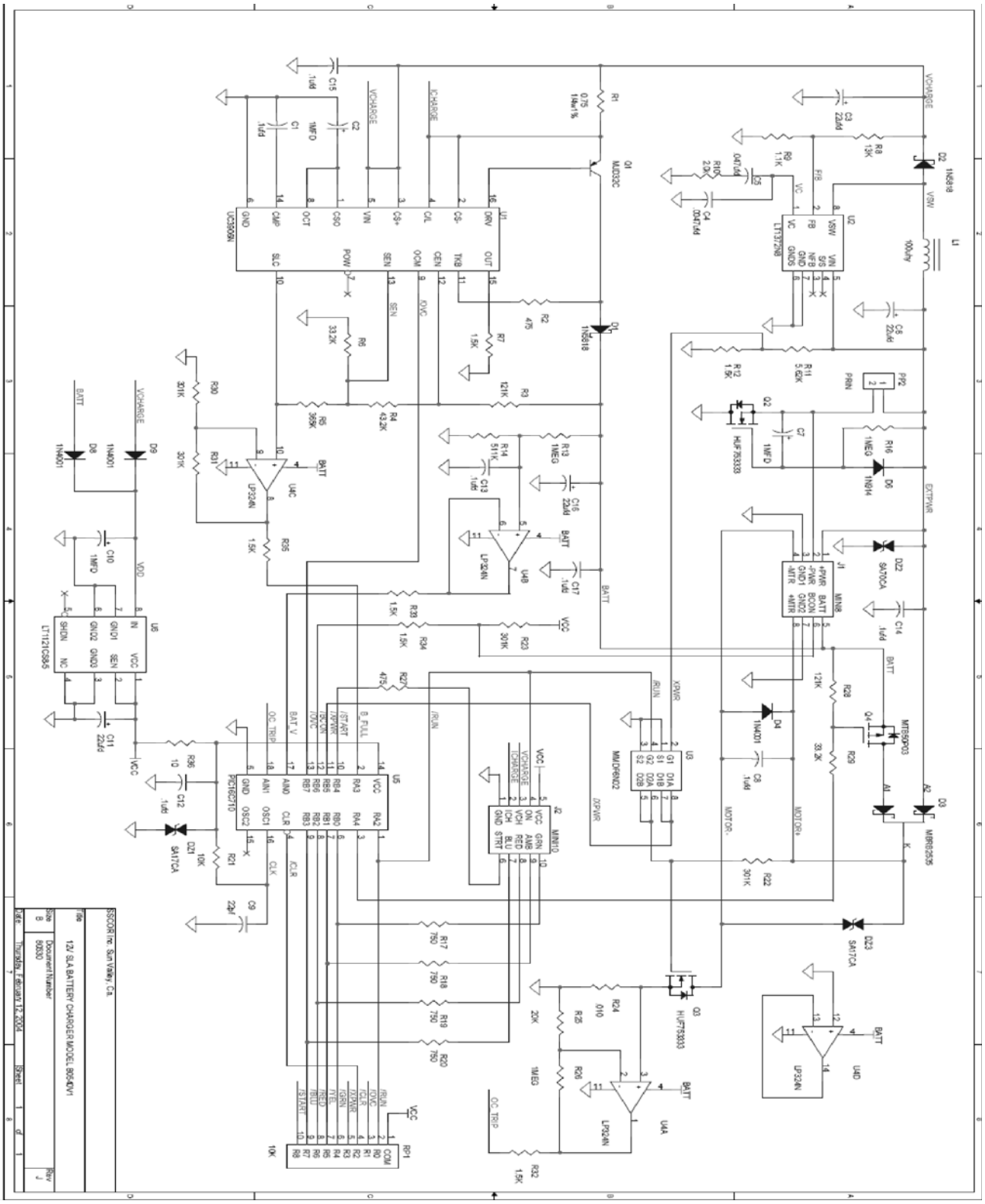
[b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [V1] V/m.

S-SCORT® new-Duet® and VX-2®
Electronic Circuit Diagrams





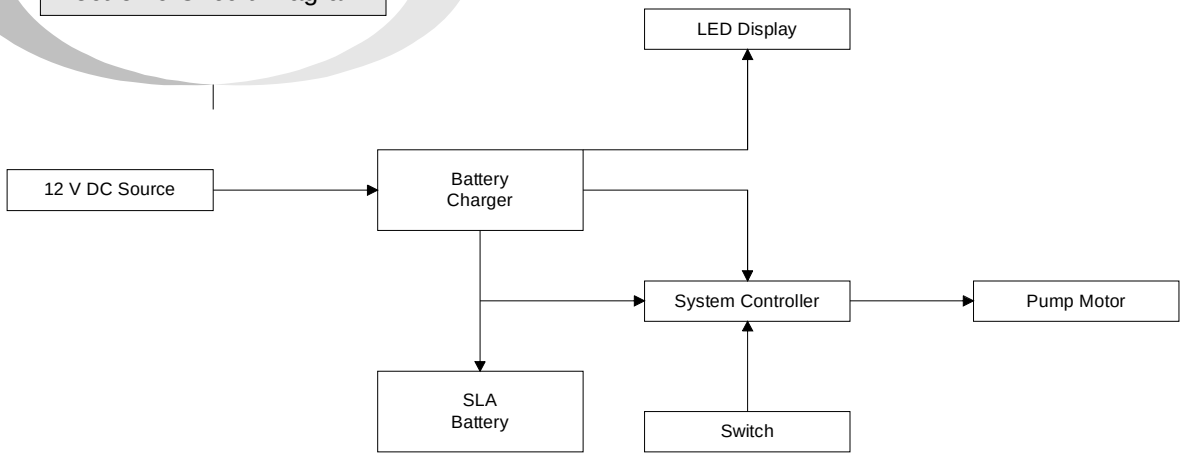
S-SCORT® new-Duet® and VX-2®
PC Board Schematic



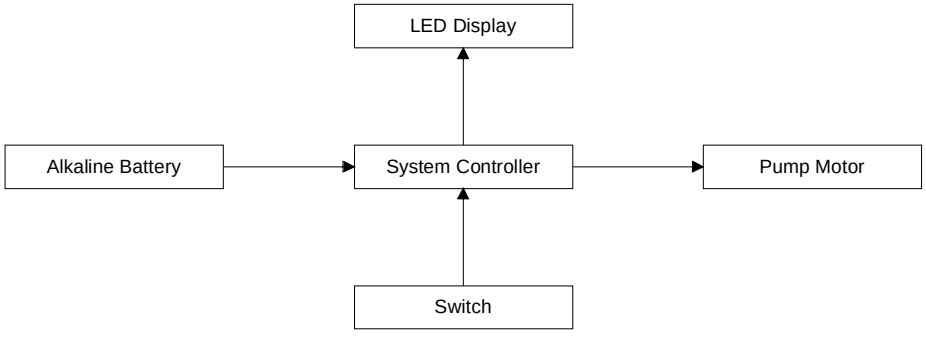
S-SCORT® Quickdraw®
Electronic Circuit Diagrams

S-SCORT Quickdraw
Models 2400, 2401, and 2402

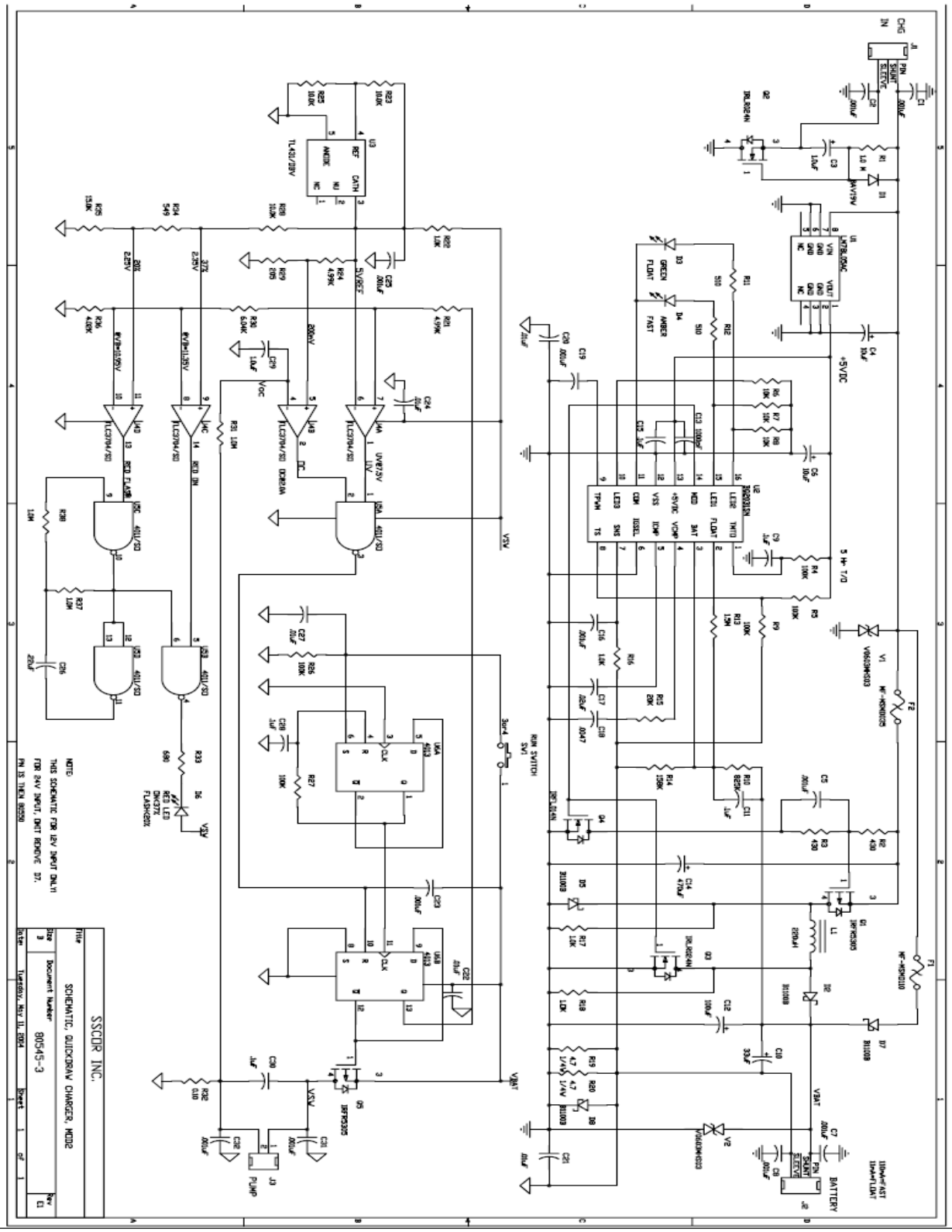
Electronic Circuit Diagram



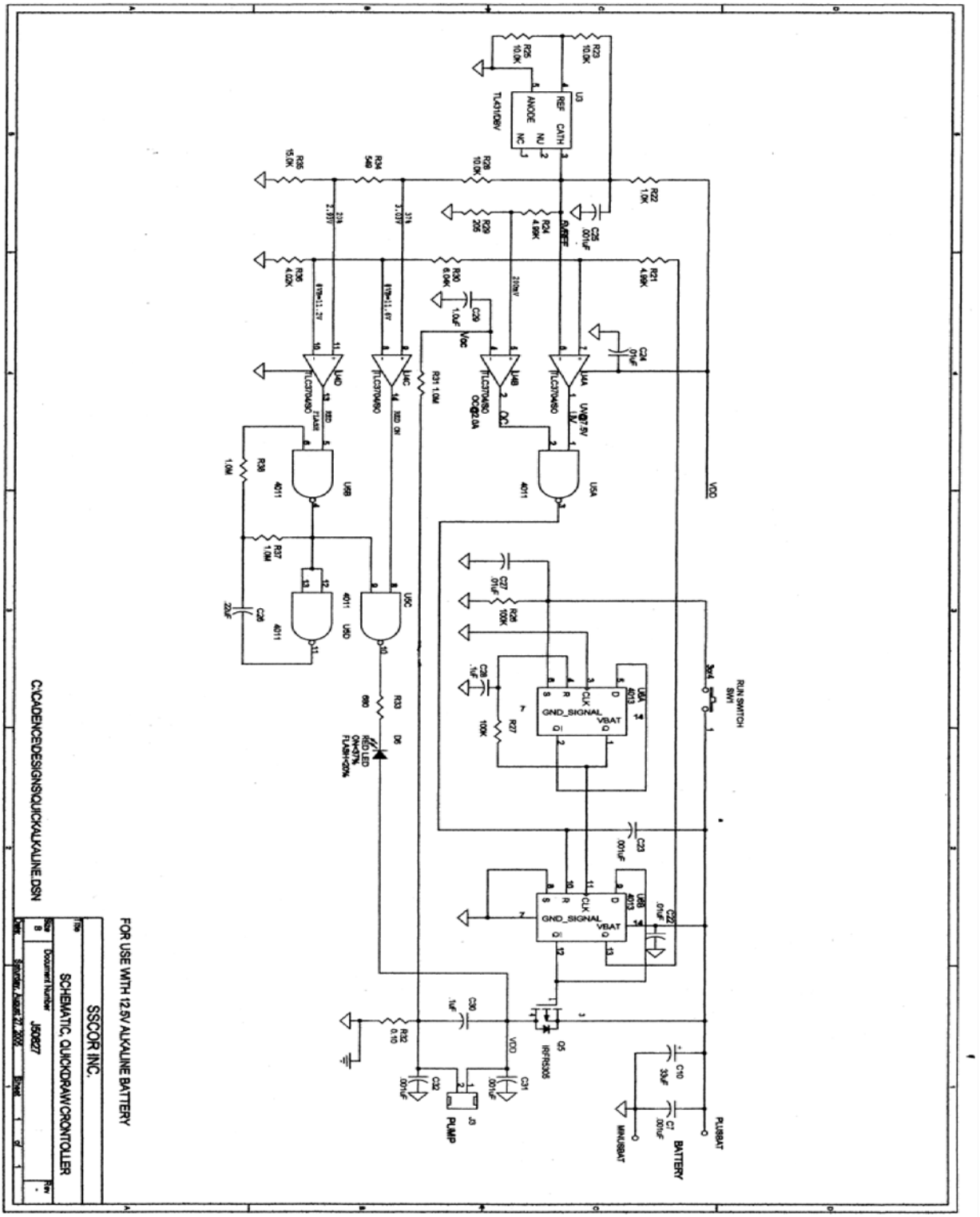
S-SCORT Quickdraw
Model 2403
Electronic Circuit Diagram



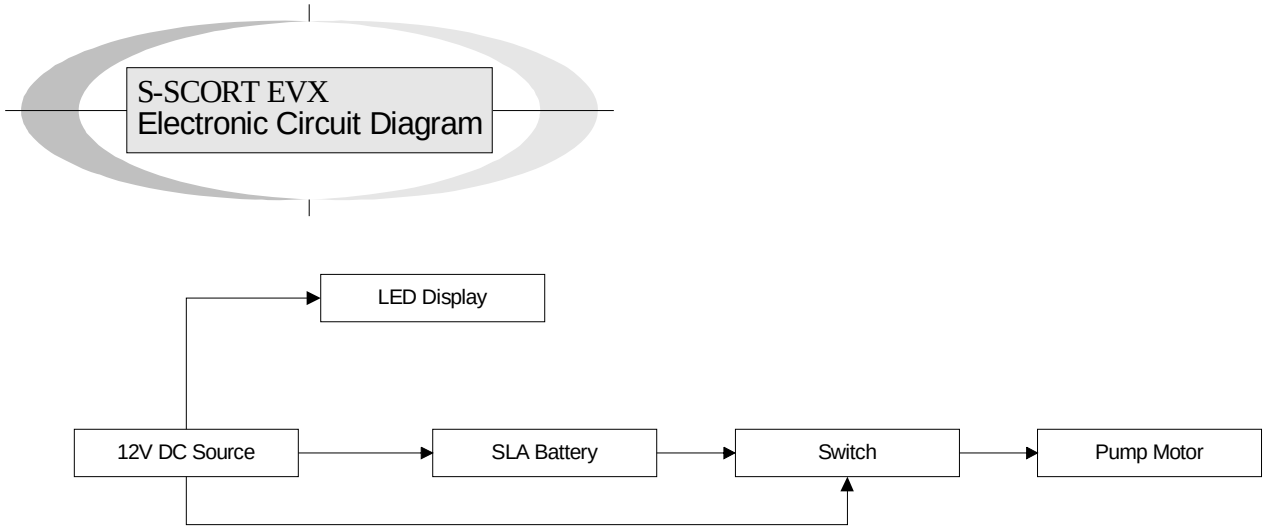
S-SCORT® Quickdraw® Models 2400, 2401, & 2402
PC Board Schematic



S-SCORT® Quickdraw® Model 2403
PC Board Schematic



S-SCORT® EVX™
Electronic Circuit Diagram



Information for Additional Schematics

For schematics of other components, please see the manufaturers' website.

http://www.parker.com/ead/cm2.asp?cmid=10295
http://www.pennmotion.com/
http://www.skynetusa.com/

or contact SSCOR Inc. for more information.